

Claims

1. Interspinal prosthesis (1) with a central part (2) with a central
5 axis (4), which can be introduced into the interspinal space, an inner end (7) and
an outer end (8), as well as two processes (3), which arise at the outer end (8),
extend radially and diametrically to the central axis (4) and can be introduced into
the space between the spinous processes of two adjacent vertebrae, characterized
in that the central part (2), at its inner end (7) averted from the processes (3), has a
10 depression (5) for accommodating a counterpart (6), which is essentially
symmetrical for accommodating the prosthesis (1).

2. The prosthesis (1) of claim 1, characterized in that the central
part (2) has coupling means (11), with which the counterpart (6) can be fixed in
15 position thereto.

3. The prosthesis (1) of claims 1 or 2, characterized in that the
cross sectional plane (9) through the central part (2), orthogonal to the central axis
(4), has an area of 50 to 300 mm² and preferably 70 to 250 mm² in the region of
20 the inner end (7).

4. The prosthesis (1) of claims 1 to 3, characterized in that the cross
sectional plane through the processes (3), orthogonal to the central axis (4), has an
area of 70 to 500 mm² and preferably of 100 to 450 mm².

25 5. The prosthesis (1) of claims 1 to 4, characterized in that it is
produced from an elastic material, which permits an elastic deformation of the
diameter of the central part (2) at its narrowest place (10) of 10 to 50% and
preferably 15 to 50% relative to the unstressed diameter.

30 6. The prosthesis (1) of claims 1 to 5, characterized in that it
consists of a plastic with a Shore hardness of 65A to 90A.

7. The prosthesis (1) of claims 1 to 5, characterized in that it consists of a metallic material and that the central part (2) includes radially and elastically deformable cogs.

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8. The prosthesis (1) of one of the claims 1 to 7, characterized in that it is constructed hollow, so that its hollow-space walls (13) can either be collapsed or, by filling the hollow space (12) with a filling material, expanded.

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9. The prosthesis (1) of one of the claims 1 to 8, characterized in that the central part (2) is constructed in the region of its inner end (7) with a smooth outer surface.

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10. The prosthesis (1) of one of the claims 1 to 8, characterized in that the central part (2), in the region of its inner end (7) is roughened at its outer surface.

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11. The prosthesis (1) of one of the claims 1 to 10, characterized in that hydroxy apatite (HA) is embedded in the prosthesis material at least on a portion of its surface.

12. The prosthesis (1) of one of the claims 2 to 11, characterized in that the coupling means (11) comprise a slide lock (27).

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13. The prosthesis (1) of one of the claims 2 to 11, characterized in that the coupling means (11) comprise elastically deformable cams (10), which, after the prosthesis (1) and the counterpart (6) are assembled, can be locked in position at the latter.

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14. The prosthesis (1) of claim 13, characterized in that at least the coupling means (11) are provided with a borehole (20) coaxially to the central axis

(4) and that the prosthesis (1) includes a pin, which can be introduced in the borehole (20).

15 15. The prosthesis (1) of one of the claims 2 to 11, characterized in that the coupling means (11) comprise a conical connection.

16 The prosthesis (1) of one of the claims 2 to 11 characterized in that the coupling means (11) comprise a screwed connection.

10 17. The prosthesis (1) of one of the claims 13 to 16, characterized in that the prosthesis (1) includes a twisting safeguard, which can be accommodated in a counterpart (6).

15 18. The prosthesis (1) of claim 1, characterized in that the axial depression (5) of the central part (2) is constructed as a continuous borehole passing through the whole of the central part (2).

19. The prosthesis (1) of one of the claims 1 to 18, characterized in that the cross sectional areas of the processes (3), viewed parallel to the central axis (4), are semicircular areas.

20 20. The counterpart (6) for a prosthesis (1) of one of the claims 1 to 19, characterized in that

- A) the counterpart (6) includes an inner end (14), an outer end (15);
- 25 B) two processes (3), which arise at the outer end (15), extend radially and diametrically to the central axis (4) and can be introduced into the space between two spinous processes of two adjacent vertebrae and
- C) includes a peg (16), which is directed towards the inner end (14) and can be introduced into the depression (5) of the prosthesis (1).

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21. The counterpart (6) of claim 20, characterized in that the peg (16) includes coupling means (11), with which the prosthesis can be fixed in position thereto.

5 22. The counterpart (6) of claim 21, characterized in that the coupling means (11) comprise a slide lock.

23. The counterpart (6) of claim 21, characterized in that the coupling means (11) comprise elastically deformable cams, which, after the
10 counterpart (6) and the prosthesis (1) are assembled, can be locked in position at the counterpart (6).

24. The counterpart (6) of claim 21, characterized in that the coupling means (11) comprise a conical connection.

15 25. The counterpart (6) of claim 21, characterized in that the coupling means (11) comprise screwed connection.

26. The counterpart (6) of one of the claims 22 to 24, characterized
20 in that the prosthesis (1) includes a twisting safeguard, which can be accommodated in a counterpart (6).

27. The counterpart (6) of one of the claims 20 to 26, characterized in that the cross sectional area of a process (3), viewed parallel to central axis (4),
25 are semicircular areas.

28. Interspinal prosthesis (1) with the counterpart (6), characterized in that, in the assembled state it has a plane of symmetry, which is orthogonal to the central axis (4).

30 29. The interspinal prosthesis (1) of one of the claims 1 to 19 with a counterpart (6) of one of the claims 20 to 26.

30. The interspinal prosthesis (1) with a counterpart (6) of claims 28 or 29, characterized in that the processes (3) of the interspinal prosthesis (1) are at a distance of at least 2 mm and preferably of at least 3 mm from those of the counterpart (6).

31. The interspinal prosthesis (1) with a counterpart (6) of one of the claims 28 to 30, characterized in that the processes (3) of the interspinal prosthesis (1) are at a distance of at most 15 mm and preferably of at most 12 mm from those of the counterpart (6).

32. The interspinal prosthesis (1) with a counterpart (6) of one of the claims 28 to 31, characterized in that the interspinal prosthesis (1) includes a first twisting safeguard and the counterpart (6) includes a second twisting safeguard, complementary to the first twisting safeguard, so that the processes (3) of the interspinal prosthesis (1) and the processes (3) of the counterpart (6) can be brought into a mutually aligned position.